AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A semiconductor device having a photo diode comprising:

a first conductivity type first semiconductor layer;

a first conductivity type second semiconductor layer disposed on said first conductivity type first semiconductor layer; and

a second conductivity type semiconductor layer formed at a surface layer portion of said first conductivity type second semiconductor layer;

wherein said first conductivity type first semiconductor layer comprises a surface impurity concentration greater than that of said first conductivity type second semiconductor layer; and

wherein ~~an end face of a depletion layer on a side of said first conductivity type first semiconductor layer and a surface layer of said first conductivity type first semiconductor layer are within no more than a predetermined distance~~ when inverse biases are applied to said first conductivity type second semiconductor layer and said second conductivity type semiconductor layer, a depletion layer is spread to a region between a first predetermined amount and a second predetermined amount in a depth direction from a surface of said second conductivity type semiconductor layer, such that a sensitivity of said photo diode to light of a first wavelength and a sensitivity of light of a second wavelength, which is different from said first wavelength, are made substantially the same.

2. (Cancelled)

3. (Currently amended) A semiconductor device as set forth in claim 1, wherein said first predetermined amount is 3 μm and said second predetermined amount is 6 μm ~~depletion layer is designed to spread in a region including a region 3 to 6 μm in a depth direction from a surface of said second conductivity type semiconductor layer~~.

4. (Currently amended) A semiconductor device as set forth in claim 1, wherein said ~~depletion layer is designed to spread in a region including a region 2 to 7 μm in a depth direction from a surface of said second conductivity type semiconductor layer~~ first predetermined amount is 2 μm and said second predetermined amount is 7 μm.

5. (Cancelled)

6. (Previously amended) A semiconductor device as set forth in claim 1, wherein said first conductivity type first semiconductor layer is a first conductivity type substrate, and said surface impurity concentration of the first conductivity type substrate is at least $1x10^{17}/cm^3$.

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7. (Cancelled) .

8. (Previously amended) A semiconductor device as set forth in claim 1, wherein said first wavelength is 780 nm and said second wavelength is 650 nm.

9. (Cancelled)

10. (New) A semiconductor device having a photo diode comprising:

a three layer structure including:

a p-type semiconductor substrate having a surface impurity concentration ranging from about $1 \times 10^{17}/cm^3$ to $1 \times 10^{19}/cm^3$;

a p-type semiconductor layer having an impurity concentration of about $5 \times 10^{13}/cm^3$ and formed on said p-type semiconductor substrate; and

an n-type semiconductor layer having an impurity concentration of about $1 \times 10^{15}/cm^3$ and formed on said p-type semiconductor layer;

wherein an end face of a depletion layer on a side of said p-type semiconductor substrate and a surface layer of said p-type semiconductor layer are within no more than a predetermined distance when inverse biases are applied to said p-type semiconductor layer and said n-type semiconductor layer, such that a sensitivity of said photo diode to light of a first wavelength and a sensitivity of light of a second wavelength, which is different from said first wavelength, are made substantially the same.

11. (New) A semiconductor device having a photo diode comprising:

a first conductivity type first semiconductor layer;

a first conductivity type second semiconductor layer disposed on said first conductivity type first semiconductor layer; and

B1 cont'd

a second conductivity type semiconductor layer formed at a surface layer portion of said first conductivity type second semiconductor layer;

wherein said first conductivity type first semiconductor layer comprises a surface impurity concentration greater than that of said first conductivity type second semiconductor layer; and

wherein when inverse biases are applied to said first conductivity type second semiconductor layer and said second conductivity type semiconductor layer, an end face of a depletion layer on a side of said first conductivity type first semiconductor layer, and a surface layer of said first conductivity type first semiconductor layer are brought within no more than 3 μm, forming a space layer, such that a sensitivity of said photo diode to light of a first wavelength and a sensitivity of light of a second wavelength, which is different from said first wavelength, are made substantially the same.